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(54) **INFINITE RESOLUTION TEXTURES**

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(57) **ABSTRACT**

A method, computer readable medium, and system are disclosed for generating and utilizing infinite resolution texture acceleration data structures. The method for generating an infinite resolution texture acceleration data structure includes the steps of receiving an image; generating an infinite resolution texture acceleration data structure associated with the image that includes a texture map, a curve index map, and a curve data map; and storing the infinite resolution texture acceleration data structure in a memory. The texture map is a two-dimensional array of texels, each texel encoding a color value based on the image. The curve data map encodes parameters for at least one curve segment associated with the image. The curve index map associates each texel in the texture map with zero or more curve segments corresponding with the texel.